



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/470,428 12/22/99 NEAL

G 8864/8

EXAMINER

000757 MM91/1030  
BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO IL 60610

MAKES, J

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

10/30/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/470,428

Applicant(s)

NEAL, GRIFFITH D.

Examiner

Joseph Waks

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 37-44 is/are rejected.
- 7) ☒ Claim(s) 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The Information Disclosure Statements filed in Papers No. 1-5, 7, and 10 have been placed in the application but the examiner will not consider references. Applicant(s) inundated the Examiner with a large volume of prior art that is not material and may obscure a single reference that is material and thus may be effective as improper as withholding a material reference. *Ex Parte Morning Surf Corp.*, 230 USPQ 446, and *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.*, 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. **Claims 14-19, and 38-41** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claims 14-19, and 38-40, the recited coefficient of the linear thermal expansion of at least  $2 \times 10^{-5}$  in/in/°F contradicts the commonly accepted definition of the coefficient as being a linear expansion in inches per one inch of length and per one degree F of temperature increase, i.e. in/in°F.

Re claim 41, the limitation of the bearing comprising steel, the support member comprising aluminum, and the thermoplastic material having a coefficient of linear thermal expansion between the coefficients of thermal linear expansion of the steel and the aluminum is not supported by the specification

4. **Claim 27** is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of an oversized bearings having an outer diameter of over 13 mm is a new matter that is not supported by the original specification.
5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. **Claim 16** recites the limitation " the upper bearing and the lower bearing " in line 2.  
There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2834

8. **Claims 1-4, 6, 10, 21-23, 26, 29, 37** are rejected under 35 U.S.C. 102(b) as being anticipated by **Yamano (US 5,783,888)**.

**Yamano** discloses in Figures 2 and 5 invention as claimed: a spindle motor having a rotating shaft, a disc support member attached to the shaft and including a permanent magnet 5b, a lower bearing 2a and an upper bearing 2b surrounding the shaft, a stator 6, and a monolithically formed body 21, 27 substantially encapsulating the stator and configured to align the shaft, the disc support and the bearing wherein the body surrounds the bearings, a core 6b, conductors 6a. The recited limitation of the thermoplastic material being injection molded is a method of forming the device that is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Re claims 21, 22, 29 the functional recitation of the bearing fixed to the body, the shaft being fixed to the support member, the motor being able to operate at least 10,000 rpm has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279.

9. **Claims 1-4, 6, 22, 23 and 26** are rejected under 35 U.S.C. 102(b) as being anticipated by **Osawa et al. (JP 405336722A)**.

**Osawa et al.** disclose in Figures 1-7 invention as claimed: a spindle motor having a rotating shaft 3, a disc support member 5a attached to the shaft and including a permanent magnet 11, a lower and an upper bearings 5 surrounding the shaft, a stator 9, and a

monolithically formed, injection molded body 16 substantially encapsulating the stator and configured to align the shaft, the disc support and the bearing wherein the body surrounds the bearings, a core 9, conductors 8.

10. **Claims 1, 3, 5-8, 11-13, 21, 28, 30-33, 43, and 44** are rejected under 35 U.S.C. 102(e) as being anticipated by **Shioya et al. (US 5,942,824)**.

**Shioya et al.** disclose in Figure 7 a high speed spindle motor comprising a fixed shaft 62, a disc support member 90 attached to the shaft and including a permanent magnet 140, lower bearing and upper bearings 66 surrounding the shaft, a stator 60, a monolithically formed body 126, 124 substantially encapsulating the stator and configured to align the shaft, the disc support and the bearing, the mounting feature 122, a substantially encapsulated insert 72, and a second, enhancement magnet 128 being a part of a magnetic bearing.

Re claims 6 and 21, **Shioya et al.** disclose in Figure 16 the shaft freely rotatable relative to the body and in Figure 7 the bearings 66 fixed to the body 122.

Re claim 33, the recited limitation of the body being machined is a method of forming the device that is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Re claims 34 and 35, the functional recitation that the insert enhances dampening of motor vibration or enhances dampening of audible noise has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279.

Re claim 33, the recited limitation of the shaft being molded or press fit to the thermoplastic body both are methods of forming the device that are not germane to the issue of patentability of the device itself. Therefore, this limitations have not been given patentable weight.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shioya et al. (US 5,942,824)** in view of **Kurosawa et al. (US 6,043,583)**.

**Shioya et al.** disclose the high-speed spindle motor essentially as claimed. However, **Shioya et al.** fail to disclose the motor having the permanent magnet concentrically disposed around the stator.

**Kurosawa et al.** disclose in column 1, lines 10-35 that the structures of inner and outer rotors are commonly used in spindle motors serving disc drives

It would have been an obvious matter of design choice to design the motor as taught by **Shioya et al.** and to provide the motor structure of an inner or outer rotor as taught by **Kurosawa et al.** for service as disc drive rotors for computer or since applicant has not disclosed that the inner or outer rotor structure solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with an inner, outer or an axial gap rotor stator configuration.

13. **Claims 24 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Osawa et al. (JP 405336722A)** in view of **Nakatsuka (US 6,075,304)**.

**Osawa et al.** disclose the spindle motor essentially as claimed. However, **Osawa et al.** fail to disclose the motor having core formed of steel laminations.

**Nakatsuka** discloses a spindle motor for a disk drive having an encapsulated stator core 1 formed of steel laminations for the purpose of reducing the eddy currents in the core. It would have been an obvious matter of design choice to design the motor as taught by **Osawa et al.** and to provide the motor having core formed of steel laminations as taught by **Nakatsuka** for the purpose of reducing the eddy currents in the core.

14. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamano (US 5,783,888)**.

**Yamano** discloses the motor essentially as claimed. However, **Yamano** fails to disclose the thermoplastic material comprising polyphenyl sulfide.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the motor as taught by **Yamano** and to provide the thermoplastic material comprising polyphenyl sulfide for the purpose of providing electrically insulating material having good thermal conductivity, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

#### ***Double Patenting***

15. **Claim 38** is objected to under 37 CFR 1.75 as being a substantial duplicate of **claim 14**.

When two claims in an application are duplicates or else are so close in content that they



both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. **Claims 14 and 38** are rejected under the judicially created doctrine of double patenting over **claim 8 of U. S. Patent No. 6,300,695** since the claim, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a shaft, a disc support member (or hub) attached to the shaft, a bearing disposed around or surrounding the shaft, a stator, and a monolithically formed body substantially encapsulated the stator having a coefficient of linear thermal expansion of less than  $2 \times 10^{-5}$  in/in°F throughout the range of 0-250°C. The recited limitation of the thermoplastic material being injection molded is a method of forming the device that is not germane to the issue of patentability of the device itself.

17. **Claim 39** is rejected under the judicially created doctrine of double patenting over **claim 3 of U. S. Patent No. 6,300,695** since the claim, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a shaft, a disc support member (or hub) attached to the shaft, a bearing disposed around or surrounding the shaft, a stator, and a monolithically formed body substantially encapsulated the stator having a coefficient of linear thermal expansion of less than  $1.5 \times 10^{-5}$  in/in°F throughout the range of 0-250°C.

18. **Claim 40** is rejected under the judicially created doctrine of double patenting over **claim 3 of U. S. Patent No. 6,300,695** since the claim, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a shaft, a disc support member (or hub) attached to the shaft, a bearing disposed around or surrounding the shaft, a stator, and a monolithically formed body substantially encapsulated the stator having a coefficient of linear thermal expansion of between about  $0.8 \times 10^{-5}$  in/in°F and about  $1.2 \times 10^{-5}$  in/in°F throughout the range of 0-250°C.

19. **Claim 20** is rejected under the judicially created doctrine of double patenting over **claim 17 of U. S. Patent No. 6,300,695** since the claim, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a shaft, a disc support member (or hub) attached to the shaft, a bearing disposed around or surrounding the shaft, a stator, and a monolithically formed body substantially encapsulated the stator having a coefficient of thermal conductivity of at least 0.7 watts/meter °K at 23°C. The recited limitation of the thermoplastic material being injection molded is a method of forming the device that is not germane to the issue of patentability of the device itself.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schmeller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

20. **Claims 15 and 16** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claim 8** of U.S. **Patent No. 6,300,695** in view of **Yamano (US 5,783,888)**.

**Claim 8** of U.S. **Patent No. 6,300,695** discloses invention essentially as claimed.

However, it fails to disclose the upper and lower bearings surrounded by the encapsulating body. **Yamano** discloses in Figure 5 the spindle motor having an upper bearing 2a and a lower bearing 2b concentrically surrounded by the encapsulating body 57, 52 for the purpose of reducing the length of the motor and proper aligning of the shaft and the rotor with the stator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the motor as taught in **claim 8** of U.S. **Patent No. 6,300,695** and to provide the upper and lower bearing surrounded by the encapsulating body as taught by **Yamano** for the

Art Unit: 2834

purpose of reducing the length of the motor and proper aligning of the shaft and the rotor with the stator.

21. **Claims 17-19** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claim 8** of U.S. **Patent No. 6,300,695** in view of **Shioya et al. (US 5,942,824)**.

**Claim 8** of U.S. **Patent No. 6,300,695** discloses invention essentially as claimed.

However, it fails to disclose the insert, enhancement magnet, and the magnetic bearing substantially encapsulated in the encapsulating body.

**Shioya et al. (US 5,942,824)** disclose in Figure 1 the spindle motor having an insert 72 substantially encapsulated in the body 124 for the purpose of directing the magnetic lines generated in the drive coils toward the rotor magnets, and the enhancement magnet 128 encapsulated in the body and serving as a thrust bearing 128, 144.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the motor as taught in **claim 8** of U.S. **Patent No. 6,300,695** and to provide the insert, enhancement magnet, and the magnetic bearing substantially encapsulated in the encapsulating body as taught by **Yamano** for the purpose of enhancing the magnetic circuit and to provide thrust bearing equalizing the axial forces during motor operation.

*Allowable Subject Matter*

22. **Claim 36** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The feature of the insert substantially encapsulated in the body and positioned between the shaft and the bearing, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

*Response to Arguments*

23. Applicant's arguments filed on August 22, 2001 have been fully considered but they are not persuasive.

In response to applicants reasoning for the extensive IDS submitted for Office consideration examiner directs applicant's attention that the 37 CFR § 1.56 defining the purpose of duty to disclose information material. The intent as clearly set by the 37 CFR § 1.56 is to serve the public interest and to assist the most effective patent examination by providing all information known to the applicants to be material to patentability as defined in this section. It also states that there is no duty to submit information which is not material to the patentability of any existing claim. Applicant submitted numerous references not related to this particular application such as; semiconductor chips and substrates, variety of motors not related to the encapsulated or molded spindle type motors, miniature and piezoelectric motors and more. Such random and non-discriminative selection of prior art is detrimental to prompt and efficient prosecution of application. Examiner directs applicant's attention that to satisfy the need to avoid an argument by an infringer, incorporating related patents and/or applications in pending application may provide a significant amount of information more efficiently. Applicant is advised to use both methods i.e. limiting the prior art to be submitted in IDS to documents directly related to the application and incorporating related applications and patents in this

Art Unit: 2834

pending application, in order to avoid the situation where inadvertently significant related information may be obscured by sheer volume of unrelated references.

In response to applicant's arguments with respect to Yamano (US 5,783,888), the recitation of a motor being used as a disc drive has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Moreover, the motor is driving 4 and as such meets the definition of the disc drive as claimed. As previously stated the limitation of the thermoplastic material being injection molded has not been given patentable weight.

In response to applicant's argument that the cited reference US 5,942,824 to Shioya et al. fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., plastic material substantially surrounding drive coils) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Referring to applicant's argued definition of a stator, the Academic Press Dictionary of Science and Technology defines stator as (a) the stationary part of a machine around which a rotor turns, and (b) the stationary part of a motor or generator.

The winding is not an inherent part of the motor stator since they are stators not utilizing winding at all, like permanent magnet stator for example. There is also accepted in the art definition of a stator limited to a stator core only (see, for example, cited US Patent No. 5,853,513 to Kelsic). Therefore the stator disclosed by accepted in the art fully complies with the claimed limitation of the monolithically formed body that substantially encapsulated the stator. As previously stated the limitation of the thermoplastic material being injection molded has not been given patentable weight.

With respect to applicants' arguments concerning the Fig. 16 teaching the rotary shaft while missing the other elements recited in claim 1, applicant's attention is directed to other Figures teaching the elements not shown in Figure 16. The claimed combination is taught and anticipated in the specification and therefore the rejection of claim 6 is appropriate. Moreover, the fixed shaft and the rotating shaft spindle motors are well known in the art.

The cited second magnet element number is 128 as corrected in this action.

The insert 72 that is mostly imbedded in the encapsulating body 122 meets the definition of a significantly encapsulated insert as claimed. Note: the inserts 260, and 670 shown by applicant in Figures 7 and 11 are as "significantly encapsulated" as the insert 72 disclosed by Shioya et al.

#### ***Prior Art***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Conclusion*

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Communication*

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676.

The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.



Application/Control Number: 09/470,428

Page 16

Art Unit: 2834

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



**JOSEPH WAKS**  
**PRIMARY PATENT EXAMINER**  
**TC-2800**

JW  
October 26, 2001